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**Summary of Diabetes Patient  
and Community  
Education/Screening  
Survey of  
Indiana Hospitals**

*Diabetes Control Program  
Indiana State Board of Health*



# **Diabetes Patient Education and Community Education Screening Survey Indiana Hospitals 1994-1995**

## **Introduction**

In June, 1994, the Indiana State Department of Health (ISDH) was awarded a grant from the Centers of Disease Control and Prevention (CDC) to develop and implement a statewide diabetes control program. One of the goals of the grant is to assure that patient education for self-management is a basic component of treatment. It is through education that persons with diabetes learn how to maintain glycemic control and prevent complications of the disease.

Another goal of the grant is to identify those persons who do not know they have diabetes and are not under medical care. The American Diabetes Association estimates there are as many persons with undiagnosed diabetes as there are diagnosed.

In order to help identify current efforts in diabetes education and screening and because hospitals are the major providers of diabetes education, 121 acute care hospitals in Indiana were sent two surveys for completion.. "Hospital Survey I" related to patient education, while "Hospital Survey II" focused on community education and screening program.

## **Methodology**

In July, 1994, all 121 acute care hospitals in Indiana were sent a cover letter and two survey forms (Appendix A and B). Each survey contained twenty questions. By December, 1994, fifty-six (46%) of the hospitals responded. Follow up letters were sent to the sixty-five hospitals that did not respond. Twenty more surveys were returned resulting in a total of eighty-six (71%) completed surveys. Phone calls were made to the remaining thirty-five hospitals and by May, 1995, all 121 (100%) acute care hospitals returned completed survey forms.

## **Analysis**

Data entry and the initial data analysis were accomplished using Epi Info, version 6.0, an epidemiological data management and analysis program developed by the Centers for Disease Control. Further data management and analysis were conducted using dBaseIV, v2.0, SPSS/PC, v4.0, and Quattro Pro, v5.0. Statistical analysis was limited to the calculation and tabulation of frequencies and proportions.

Survey results indicate all programs cover diabetes risk factors and symptoms. Thirty-five programs discuss diabetes complications and the relationship between nutrition and exercise in diabetes control. Nurses serve as the primary instructor, with half being certified diabetes educators.

The most commonly used educational tools are brochures, pamphlets and fact sheets. The most commonly cited sources of materials for diabetes education/screening are the vendors of pharmaceuticals and other products used in the care and treatment of diabetes. Although the majority of educational and screening activities take place in the hospital/clinic setting, most hospitals that offer educational programs present them at community organizations and worksites. Newspapers and health fairs are the two most popular forms of advertising.

Thirty-three of the 43 hospitals providing community diabetes education also provide screening with the random plasma glucose test being most commonly used. One-third of the hospitals doing screening charge a fee service ranging from one to ten dollars.

All but one of the hospitals offering screening tests reported making some provision for follow up services for persons presumptively positive for diabetes. Most of these referrals are made to the person's own family doctor.

### **Summary Discussion**

Results from the survey indicate that, except for a few counties, persons with diabetes who live in Indiana have the opportunity to participate in a hospital based education program. Costs may be a concern for some individuals as more than half of the hospitals offering a diabetes education program charge a fee, with eighteen charging in excess of \$100.00. Moreover, it was reported that half or fewer participants had insurance covering diabetes education. Clearly there is a lack of consistent reimbursement and coverage. Private health insurance companies doing business in Indiana are being urged by the American Diabetes Association to pay for their subscribers' diabetes education. Numerous studies have proven diabetes education can not only save on medical costs, but, more importantly, can decrease the complications and deaths from this serious disease.

It appears that community diabetes education/screening programs are limited in Indiana as only 43 of the 121 hospitals in the state offer this service to the community. Additionally, only 36 hospitals without a program of their own indicated other facilities in the area have a diabetes education screening program. This potentially leaves 46 counties in Indiana without a community diabetes education/screening program. Since national studies suggest 50% of persons with diabetes are undiagnosed, it is clear that community education/screening programs for persons with increased risk of diabetes need to be promoted in Indiana.

## **Overview of Results**

### **Hospital Survey I, Diabetes Patient Education**

Of the 121 acute care hospitals in Indiana, 106 (87.6%) offer a patient diabetes education program. Two of the hospitals not offering a program provide individual instruction, while the remaining thirteen hospitals refer patients to other hospitals in the county, private physicians or other referral resources. Ten counties in the state do not have a diabetes education program available through the hospital in their county (See Appendix III).

Approximately one-third of the hospitals do not charge for the diabetes education program, while others charge from less than twenty-five dollars up to and exceeding one hundred dollars. Half or fewer of the patients had insurance covering diabetes education.

The majority of hospitals provide anywhere from one to seven sessions in their educational program totaling from one to ten patient contact hours. Nurses serve as the primary instructors for most programs with about half being certified diabetes educators. The curriculum content is comprehensive from the standpoint of topics included. The survey did not attempt to evaluate the content or quality of the instruction.

Approximately half of the hospitals perform monitoring tests. The random plasma glucose test is the most widely used monitoring test statewide.

The most popular educational tools are videos and brochures/pamphlets provided through the American Diabetes Association and a variety of other sources including self developed materials. Over 95% of the hospitals provide the education within the hospital. Brochures, newspapers and health fairs are the most widely used form of advertising the education program. A small number of hospitals provide free patient transportation.

## **Overview of Results**

### **Hospital Survey II-Diabetes Community Education and Screening**

Of the 121 acute care hospitals in Indiana, forty-three (36%) report having community diabetes education/screening programs targeted at individuals with an increased risk for diabetes.

Thirty-six hospitals without a program of their own indicated that other facilities/organizations in the area have a community diabetes education/screening program. A listing of the 46 counties that do not have a hospital sponsored community diabetes education/screening program or other facility/organization identified by them as a provider of the service can be found in Appendix IV. Most hospitals offering programs devote from one to ten hours a week on public educational/screening initiatives.

# Hospital Survey I

## Diabetes Patient Education

### Results and Discussion

All 121 acute care hospitals in Indiana responded to the survey, resulting in a 100 percent response rate. Of these, 106 (88%) report having a diabetes education program (Table 1). A list of the 15 hospitals that do not offer a diabetes program and their referral sources can be found in Appendix I. Except as otherwise indicated, the following tables are based on responses from the 106 hospitals with diabetes education programs.

**Table 1. Number of acute care hospitals in Indiana that offer a diabetes education program (n=121)**

Program	Number	Percent
Yes	106	87.6
No	15	12.4
Total	121	100.0

Ninety-two percent of hospitals offer the diabetes education program to inpatients while ninety-five percent offer diabetes education programs on an outpatient basis (Table 2). In addition to offering the program to patients, 72 percent (n=76) of the hospitals reported offering the program to the general public and to their staff as an in-service.

**Table 2. Target audience to whom the diabetes education program is offered (n=106)**

Group	Yes	%	No	%	No Resp.	%
Inpatients	97	91.5	4	3.8	5	4.7
Outpatients	101	95.3	4	3.8	1	0.9
General Public	76	71.7	21	19.8	9	8.5
Staff in-service	76	71.7	16	15.1	14	13.2
Other	10	9.4	44	41.5	52	49.1

Hospitals were asked to provide certain demographic information on the persons who attend their diabetes education programs. Only 62 (59%) of the 106 hospitals with programs supplied the requested race/ethnicity information, 49 (46%) provided age group, and 21 (20%) responded to the income question. Those that did not complete this question stated the information was not available. Aggregate totals of the numbers reported by these hospitals are shown in Tables 3, 4, and 5.

Fifty-five percent of the persons attending diabetes patient education programs in the reporting group of hospitals were female and 62 percent of the attendees were age 50 and over. Blacks, made up 21 percent of the persons attending these programs.

**Table 3. Race/ethnicity and gender of persons attending diabetes education programs (Reported by 62 of 106 hospitals)**

<b>Race/Ethnicity</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Percent</b>
White (Non-Hispanic)	7,086	8,897	15,983	73.0
Black (Non-Hispanic)	2,000	2,500	4,500	20.6
Hispanic	443	645	1,088	5.0
Amer. Ind./Pac. Islander	27	35	62	0.3
Other	120	143	263	1.2
Total	9,676	12,220	21,896	100.0

**Table 4. Age group and gender of persons attending diabetes education programs(Reported by 49 of 106 hospitals)**

<b>Age Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Percent</b>
<19	332	387	719	2.9
19-34	1,203	1,669	2,872	11.7
35-49	2,566	3,067	5,633	23.0
50-64	3,515	4,033	7,548	30.8
65+	3,395	4,350	7,745	31.6
Total	11,011	13,506	24,517	100.0

**Table 5. Total family income of persons attending diabetes education programs (Reported by 21 of 106 hospitals)**

Family Income	Number	Percent
< \$10,000	949	13.7
10,000-19,999	1,635	23.5
20,000-34,999	2,566	36.9
35,000-49,999	1,175	16.9
> 50,000	627	9.0
Total	6,952	100.0

Sixty-nine (66%) of the hospitals having diabetes education programs charge a fee for those services (Table 6). Reported fees for the complete education program were most commonly in the \$26-\$65 range (41% of the hospitals specifying an amount). However, 28 percent indicated that they charge more than \$100. Five of the hospitals charging a fee did not report the amount charged.

**Table 6. Fee charged for the entire diabetes education program offered by acute care hospitals in Indiana (n=106)**

Fee Range	Hospitals	Percent
Sliding Scale	3	2.8
\$5.00-\$25.00	7	6.6
\$26.00-\$45.00	14	13.2
\$46.00-\$65.00	12	11.3
\$66.00-\$85.00	8	7.5
\$86.00-\$100.00	2	1.9
Over \$100.00	18	17.0
No Fee	37	34.9
Not Reported	5	4.7
Total	106	100.0

Fifty-one percent of the hospitals charging a fee reported that half or fewer of the participants had insurance covering diabetes education (Table 7). Nineteen percent indicated that less than 10 percent of enrollees had insurance coverage while only nine percent reported that more than 75 percent of their participants were covered.

**Table 7. Proportion of the patients enrolled in diabetes education programs whose fees are covered by insurance (n=69)**

Percent Covered	Hospitals	Percent
Under 10	13	18.8
10-25	9	13.0
26-50	13	18.8
51-75	18	26.1
76-100	6	8.7
No Response	10	14.5
Total	69	100.0

Most hospitals charging a fee will accept private insurance, Medicare, or Medicaid payment for these services. These and other forms of payment are summarized in Table 8.

**Table 8. Forms of payment accepted by acute care hospitals in Indiana that charge fees for diabetes education programs (n=69)**

Form of Payment	Yes		No		No Response	
	Hospitals	Percent	Hospitals	Percent	Hospitals	Percent
Medicare	60	87.0	4	5.8	5	7.2
Private Insurance	61	88.4	3	4.3	5	7.2
Sliding Scale	21	30.4	30	43.5	18	26.1
Medicaid	56	81.2	7	10.1	6	8.7
Self Payment	68	98.6	0	0.0	1	1.4
HMO/PPO	50	72.5	11	15.9	8	11.6
Other	4	5.8	25	36.2	40	58.0

A majority (72%) of the hospital diabetes education programs include seven or fewer patient sessions (Table 9). Most of the remainder schedule sessions as needed. Most commonly (78%), the duration of patient contact is 10 hours or less (Table 10); however, (8%) of them reported more than 20 hours of patient contact.



**Table 9. Number of patient sessions included in diabetes education programs offered by acute care hospitals in Indiana (n=106)**

Sessions	Hospitals	Percent
1-3	33	31.1
4-7	42	39.6
8-10	3	2.8
Over 10	3	2.8
As Needed	24	22.6
No Response	1	0.9
Total	106	100.0

**Table 10. Total hours of patient contact included in hospital diabetes education programs (n=106)**

Hours	Hospitals	Percent
1-5	46	43.4
6-10	40	37.7
11-15	7	6.6
16-20	2	1.9
Over 20	8	7.5
No Response	3	2.8
Total	106	100.0

Most of the responding hospitals reported one or two full-time and/or part-time instructors (Table 11). Altogether, 63 hospitals reported 118 full-time instructors and 62 hospitals reported 161 part-time instructors. About 40 percent of the hospitals with programs failed to respond to this survey question, however.

**Table 11. Number of full-time and part-time instructors (n=106)**

Number	Full-Time		Part-Time	
	Hospitals	Total	Hospitals	Total
1	32	32	24	24
2	19	38	16	32
3	5	15	11	33
4	3	12	3	12
5	3	15	5	25
6	1	6	0	0
8	0	0	1	8
10	0	0	1	10
17	0	0	1	17
Total	63	118	62	161
No Resp.	43		44	

Nurses serve as the primary instructors for most programs (Table 12). Dietitians are also involved in significant numbers. It should be noted in Table 12 that several of the 106 hospitals with programs reported more than one primary instructor; specifically, 106 hospitals reported 136 primary instructors.

**Table 12. Educational background of primary instructor (n=136)**

Background	Number	Percent
Physician	1	0.7
Nurse	102	75.0
Dietitian	28	20.6
Health Educator.	5	3.7
Total	136	100.0

As shown in Table 13, (51%) of the primary instructors were reported to be Certified Diabetes Educators.

**Table 13. Is the primary instructor a certified diabetes educator? (n=106)**

<b>Response</b>	<b>Number</b>	<b>Percent</b>
Yes	54	50.9
No	51	48.1
No Response	1	0.9
Total	106	100.0

With regard to content of curriculum, virtually all programs cover most of the topics listed in Table 16. It appears that the programs offered are quite comprehensive from the standpoint of topics included. Of course, the survey gathered no data on the depth of coverage of each topic.

**Table 16. Curriculum content of diabetes education programs offered by acute care hospitals in Indiana (n=106)**

<b>Topic</b>	<b>Yes</b>		<b>No</b>		<b>No Response</b>	
	<b>Hospitals</b>	<b>Percent</b>	<b>Hospitals</b>	<b>Percent</b>	<b>Hospitals</b>	<b>Percent</b>
Self-glucose monitoring	105	99.1	1	0.9	0	0.0
Risk factors	99	93.4	1	0.9	6	5.7
Self-medication	103	97.2	2	1.9	1	0.9
Potential complications	106	100.0	0	0.0	0	0.0
Nutrition	104	98.1	1	0.9	1	0.9
Eye care	99	93.4	6	5.7	1	0.9
Oral health	93	87.7	11	10.4	2	1.9
Exercise	105	99.1	1	0.9	0	0.0
Foot care	105	99.1	0	0.0	1	0.9
Psychosocial aspects	93	87.7	13	12.3	0	0.0
Pregnancy	77	72.6	24	22.6	5	4.7
Sharps disposal	101	95.3	2	1.9	3	2.8

As shown in Table 17, about half of the hospitals providing diabetes education also offer monitoring tests to their diabetic patients. Table 18 reports the kinds of tests offered by the 56 hospitals providing this service.

**Table 17. Monitoring tests provided by acute care hospitals in Indiana that offer a diabetes education program (n=106)**

Tests Provided	Hospitals	Percent
Yes	56	52.8
No	50	47.2
Total	106	100.0

**Table 18. Diabetes monitoring tests performed by 56 acute care hospitals in Indiana**

Response	Hospitals	Percent
Hemoglobin A1c	23	41.1
Random Plasma Glucose	46	82.1
Microalbumin	11	19.6
Creatinine	13	23.2
Other	11	19.6

As summarized in Table 19, the most commonly used educational tools are brochures or pamphlets (96%) and videos (95%). More than half of the programs utilize books, fact sheets, clinical simulations, and charts.

**Table 19. Educational tools used in diabetes education programs provided by acute care hospitals in Indiana (n=106)**

Tools	Hospitals	Percent
Videos	101	95.3
Brochures/Pamphlets	102	96.2
Charts/Graphics	59	55.7
Books	77	72.6
Clinical simulation/models	62	58.5
Tapes	26	24.5
Fact Sheets	70	66.0
Other	18	17.0

As Table 20 shows, the most commonly cited sources of tools for diabetes education are the hospital program itself (72%), the vendors of pharmaceuticals and other products used

in care and treatment of diabetes (66%), and the American Diabetes Association (ADA) (63%).

**Table 20. Sources of educational materials used by acute care hospitals in Indiana in diabetes education programs (n=106)**

Source	Hospitals	Percent
ADA	67	63.2
NIH	13	12.3
Develop own	76	71.7
Vendors	70	66.0
Other	11	10.4
Do not furnish	1	0.9

Not surprisingly, as shown in Table 21, these hospital-sponsored programs most often provide the educational sessions in their own hospital (96%). The second most common setting is community organizations (30%). Significant numbers also utilize schools (20%), worksites (20%), patients= homes (19%), and clinics (18%).

**Table 21. Settings in which acute care hospitals in Indiana offer diabetes education (n=106)**

Setting	Yes		No		No Response	
	Hospitals	Percent	Hospitals	Percent	Hospitals	Percent
Hospital	102	96.2	1	0.9	3	2.8
Patient's home	20	18.9	63	59.4	23	21.7
School	21	19.8	62	58.5	23	21.7
Clinic	19	17.9	63	59.4	24	22.6
Community organization	32	30.2	53	50.0	21	19.8
Worksite	21	19.8	61	57.5	24	22.6
Other	7	6.6	50	47.2	49	46.2

Hospitals have most often relied on newspapers (59%), health fairs (54%), and brochures

(52%) to reach target populations with information about diabetes education programs (Table 22). About one-third had used mailings for this purpose. These survey data indicate only the hospitals' history of using the specified modes of advertising and offer no insight into the relative effectiveness of various methods in reaching target populations.

**Table 22. advertising methods used to inform target population(s) about the diabetes education program (n=106)**

Methods	Hospitals	Percent
Radio/TV PSA	27	25.5
Bus advertisements	1	0.9
Billboards	2	1.9
Posters	16	15.1
Brochures	55	51.9
Newspapers	62	58.5
Minority-targeted media	2	1.9
Press conferences	3	2.8
Mailings	36	34.0
Health fairs	57	53.8
Comm. organizations/ church announcements	22	20.8
None	14	13.2

Hospitals having diabetes education programs were asked to define their service catchment areas as city only (7%), single county (47%), multi-county region (40%) or statewide (4%) (Table 23). The large proportion of multi-county regions indicates that these programs are being offered on a wider geographic scale than the immediate vicinity of 106 hospitals.

**Table 23. Service catchment area of acute care hospitals in Indiana that offer a diabetes education program (n=106)**

Area	Hospitals	Percent
City	7	6.6
County	50	47.2
Multi-County Region	42	39.6
State	4	3.8
No Response	3	2.8
Total	106	100.0

Only 12 of the 106 hospitals offering diabetes education programs also provide

transportation to assist patients in attending the program sessions. Of these 12 hospitals, only one indicated that there is a charge to the patient for transportation.

**Table 24. Provision of patient transportation by acute care hospitals in Indiana that offer a diabetes education program (n=106)**

<b>Transportation Provided</b>	<b>Hospitals</b>	<b>Percent</b>
Yes	12	11.3
No	93	87.7
No Response	1	0.9
Total	106	100.0

# Hospital Survey II

## Diabetes Community Education and Screening

### Results and Discussion

All 121 acute care hospitals in Indiana responded to the survey, resulting in a 100 percent response rate. Of these, 43 (36%) report having community diabetes education/screening programs targeted at individuals with an increased risk for diabetes (Table 1). Except as otherwise indicated, the following tables are based on responses from the 43 hospitals with diabetes community education and screening programs.

**Table 1. Number of acute care hospitals in Indiana that offer community diabetes education/screening programs (n=121)**

Program	Number	Percent
Yes	43	35.5
No	78	64.5
Total	121	100.0

Of the 43 hospitals offering community programs, 13 (30%) indicated that the programs were offered in cooperation with another organization (Table 2).

**Table 2. Hospitals offering community diabetes education and screening programs in cooperation with another organization (n=43)**

Response	Number	Percent
Yes	13	30.2
No	30	69.8
Total	43	100.0

The majority of hospitals (58%) estimated that less than five hours per month are devoted to community diabetes educational/screening initiatives (Table 3.). Another 28 percent indicate that they spend from five to ten hours per month on these efforts. At the other end of the spectrum, a few hospitals (7%) reported more than 20 hours per month devoted to these programs.



**Table 3. Number of hours per month devoted by Indiana hospitals to community diabetes educational/screening initiatives (n=43)**

Hours	Number	Percent
<5	25	58.1
5-10	12	27.9
11-15	2	4.7
16-20	1	2.3
>20	3	7.0
Total	43	100.0

More than 81 percent of hospitals with community programs responded that they target family members of persons with diabetes for education and screening (Table 4). An even higher proportion (88%) target the elderly (males and females age 65 and over) while about 56 percent specifically target minorities. Examples provided for the AOther@ category included employees at worksites, gestational patients, overweight, persons over age 40, and any persons at risk for diabetes.

**Table 4. Groups targeted by hospitals for diabetes education/screening (n=43)**

Group	Yes	%	No	%	No Resp.	%
Family Members	35	81.4	2	4.7	6	14.0
Minorities	24	55.8	10	23.3	9	20.9
Elderly	38	88.4	2	4.7	3	7.0
Other	23	53.5	7	16.3	13	30.2

Hospitals were asked to provide certain demographic information on the persons who attend their community diabetes education/screening programs. Only 15 (35%) of the 43 hospitals with programs supplied the requested race/ethnicity information and only 14 (33%) provided age group. Aggregate totals of the numbers reported by these hospitals are shown in Tables 5 and 6.

**Table 5. Race/ethnicity and gender of persons attending community diabetes education/screening (Reported by 15 of 43 hospitals)**

<b>Race/Ethnicity</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Percent</b>
White (Non-Hispanic)	3,312	4,224	7,536	74.9
Black (Non-Hispanic)	563	759	1,322	13.1
Hispanic	491	629	1,120	11.1
Amer. Ind./Pac. Islander	10	11	21	0.2
Other	25	32	57	0.6
Total	4,401	5,655	10,056	100.0

**Table 6. Age group and gender of persons attending community diabetes education/screening (Reported by 14 of 43 hospitals)**

<b>Age Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Percent</b>
<18	81	89	170	1.7
19-34	539	725	1,264	12.7
35-49	1,058	1,145	2,203	22.2
50-64	1,378	1,634	3,012	30.4
65+	1,366	1,906	3,272	33.0
Total	4,422	5,499	9,921	100.0

Most education or screening sessions were reported to be one to four hours in duration (Table 7). One in five last more than four hours, however.

**Table 7. Total hours duration of each education/screening program (n=43)**

<b>Hours</b>	<b>Number</b>	<b>Percent</b>
<1	5	11.6
1-2	11	25.6
3-4	15	34.9
>4	9	20.9
No Response	3	7.0
Total	43	100.0

Most of the responding hospitals reported one or two full-time and/or part-time instructors and outreach workers (Table 8). About one-third of the hospitals with programs failed to respond to this survey question, however.

**Table 8. Number of full-time and part-time instructors/outreach workers (n=43)**

Number	Full-Time		Part-Time	
	Hospitals	Total	Hospitals	Total
1	13	13	13	13
2	11	22	8	16
3	2	6	2	6
4	0	0	2	8
5	1	5	3	15
6	0	0	1	6
18	1	18	0	0
No Resp.	15	0	14	0
Total	43	64	43	64

Nurses serve as the primary instructors for most programs (Table 9). Dietitians and health educators are also involved in significant numbers. It should be noted in Table 9 that several of the 43 hospitals with programs reported more than one primary instructor.

**Table 9. Educational background of primary instructor (n=43)**

Background	Number	Percent
Nurse	41	95.3
Dietitian	9	20.9
Health Educator.	7	16.3
Other	1	2.3
Total	58	134.9

As shown in Table 10, approximately 40 percent of primary instructors were reported to be certified diabetes educators.

**Table 10. Is the primary instructor a certified diabetes educator? (n=43)**

Response	Number	Percent
Yes	17	39.5
No	26	60.5
Total	43	100.0

All programs cover risk factors and symptoms and most also include discussion of complications, nutrition, exercise, and terminology (Table 11). Gestational diabetes is

less frequently included in the curriculum. Other topics reported to be covered were psychosocial issues, stress management, medications, insulin, normal glucose levels, self-glucose monitoring, and foot and eye care.

**Table 11. Topics included in curriculum (n=43)**

Topics	Yes	%	No	%	No Resp.	%
Risk Factors	43	100.0	0	0.0	0	0.0
Symptoms	43	100.0	0	0.0	0	0.0
Complications	40	93.0	2	4.7	1	2.3
Nutrition	35	81.4	5	11.6	3	7.0
Gestational Diabetes	25	58.1	12	27.9	6	14.0
Exercise	35	81.4	5	11.6	3	7.0
Terminology	38	88.4	3	7.0	2	4.7
Other	13	30.2	16	37.2	14	32.6

As summarized in Table 12, the most commonly used educational tools are brochures or pamphlets (91%) and fact sheets (72%). About half of the programs utilize videos and charts or graphics. Books (40%) and tapes (7%) are less commonly used.

**Table 12. Educational tools used by hospital-sponsored community diabetes education/screening programs (n=43)**

Tools	Number	Percent
Videos	21	48.8
Brochures/Pamphlets	39	90.7
Charts/Graphics	21	48.8
Books	17	39.5
Tapes	3	7.0
Fact Sheets	31	72.1
Other	5	11.6

As Table 13 shows, the most commonly cited sources of tools for diabetes education/screening are the vendors of pharmaceuticals and other products used in care and treatment of diabetes (70%). Approximately two-thirds of the 43 hospitals reported that they use educational materials obtained from the American Diabetes Association (ADA). A nearly equal proportion (63%) use materials they have developed themselves and a much smaller number (12%) use tools produced by the National Institutes of Health (NIH).

**Table 13. Sources of educational materials used by hospital-sponsored community diabetes education/screening programs (n=43)**

Source	Number	Percent
ADA	28	65.1
NIH	5	11.6
Develop Own	27	62.8
Vendors	30	69.8
Other	3	7.0
None	1	2.3

Not surprisingly, as shown in Table 14, these hospital-sponsored programs most often provide the educational sessions and screening activities in their own hospital or clinics (88%). The majority also present programs at community organizations (77%) and worksites (58%). Less commonly, churches (35%) and homes (16%) are the settings for community diabetes education/screening activities.

**Table 14. Settings in which the education is provided (n=43)**

Setting	Yes	%	No	%	No Resp.	%
Hospital/Clinics	38	88.4	2	4.7	3	7.0
Schools	20	46.5	16	37.2	7	16.3
Community Org.	33	76.7	5	11.6	5	11.6
Home	7	16.3	24	55.8	12	27.9
Churches	15	34.9	18	41.9	10	23.3
Worksites	25	58.1	11	25.6	7	16.3
Other	7	16.3	19	44.2	17	39.5

Hospitals have most often relied on newspapers (77%) and health fairs (77%) to reach target populations with information about education/screening programs (Table 15). About half of the reporting hospitals had used brochures (54%) or mailings (49%). Somewhat smaller proportions reported use of community organizations (40%), public service announcements on radio or television (33%), and posters (30%). Even fewer had tried church announcements (16%) or minority-targeted media (9%) Bus advertisements,

billboards, and press conferences had not been used by any of the 43 reporting hospitals. These survey data indicate only the hospitals' history of using the specified modes of advertising and offer no insight into the relative effectiveness of various methods in reaching target populations.

**Table 15. Advertising methods used to inform target population(s) about diabetes education/screening programs (n=43)**

Methods	Number	Percent
Radio/TV PSA	14	32.6
Bus Advertisement	0	0.0
Billboards	0	0.0
Posters	13	30.2
Brochures	23	53.5
Newspapers	33	76.7
Minority-targeted Media	4	9.3
Press conferences	0	0.0
Mailings	21	48.8
Health Fairs	33	76.7
Community Organizations	17	39.5
Church Announcements	7	16.3
Other	8	18.6

As shown in Table 16, three-quarters of the hospitals providing community diabetes education also offer screening programs. Table 17 reports the kinds of tests offered by the 33 hospitals providing screening, most commonly random plasma glucose (85%). One-third of the screening hospitals charge a fee for this service (Table 18), ranging from one to 10 dollars (Table 19).

**Table 16. Screening tests offered to persons identified as At-risk for diabetes (n=43)**

Screening	Number	Percent
Yes	33	76.7
No	10	23.3
Total	43	100.0

**Table 17. Tests performed by hospitals offering screening (n=33)**

<b>Tests</b>	<b>Number</b>	<b>Percent</b>
Random Plasma Glucose	28	84.8
Microalbumin	1	3.0
Hemoglobin A1c	3	9.1
Test Not Specified	5	15.2

**Table 18. Fees charged for the screening tests (n=33)**

<b>Fee Charged</b>	<b>Number</b>	<b>Percent</b>
Yes	11	33.3
No	22	66.7
Total	33	100.0

**Table 19. Amount of fee charged for diabetes screening tests (n=11)**

<b>Amount Charged (Dollars)</b>	<b>Number</b>	<b>Percent</b>
1	1	9.1
2	1	9.1
3	2	18.2
4	1	9.1
5	3	27.3
9	1	9.1
10	2	18.2
Total	11	100.0

All but one of the hospitals offering screening tests reported that they make some

provision for follow-up services for persons presumptively positive for diabetes (Table 20). Most (97%) will make a referral to the person=s own family doctor. One-third also offer the services of their own hospital or clinic for follow-up.

**Table 20. Follow-up services provided for persons who test presumptively positive for diabetes (n=33)**

Services	Number	Percent
Clinic/Hospital	11	33.3
Patient=s Doctor	32	97.0
Specific Physician	1	3.0
No Follow-up	1	3.0
Other	6	18.2

Hospitals having community diabetes education/screening programs were asked to define their service catchment areas as city only (12%), single county (44%), or multi-county region (42%). The large proportion of multi-county regions indicates that these programs are being offered on a wider geographic scale than the immediate vicinity of 43 hospitals.

**Table 21. Service catchment area of hospitals offering community diabetes education/screening programs (n=43)**

Area	Number	PercentCity
5	11.6	
County	19	44.2
Multi-County Region	18	41.9
No Response	1	2.3
Total	43	100.0

All 121 hospitals were asked to indicate whether there are other facilities in their area that offer community diabetes education/screening programs. Forty-one (34%) of the hospitals answered in the affirmative (Table 22). Included were 22 hospitals which also reported that they have programs and 19 hospitals without programs of their own.



Table 23 categorizes the facilities other than the reporting hospitals which offer diabetes education/screening programs to the community. The "other" category in Table 23 most commonly referred to local chapters of the American Diabetes Association or local health departments.

**Table 22. Other facilities in area having community diabetes education/screening programs (n=121)**

<b>Response</b>	<b>Number</b>	<b>Percent</b>
Yes	41	33.9
No	73	60.3
No Response	7	5.8
Total	121	100.0

**Table 23. Other organizations offering diabetes education/screening (n=41)**

<b>Organization</b>	<b>Number</b>	<b>Percent</b>
Clinic/Physician	2	4.9
Community Organization	9	22.0
Other Hospital	24	58.5
Other	18	43.9

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